ABSTRACT

A device for reforming gas vapors of an internal combustion engine having an air induction system, a combustion chamber, and positive crankcase and fuel tank associated therewith, the device comprising a voltage multiplier unit, a gas vapor treatment means and a gas vapor reforming means disposed within the gas vapor treatment means and in communication with said voltage multiplier unit, characterized in that said gas vapor treatment means having a treatment chamber in communication with a gas vapor intake port and gas vapor discharge port, gas vapor intake port being capable of communicating with said positive crankcase and fuel tank and said gas vapor discharge port being capable of communicating with said air induction system, said gas vapor reforming means is an electronic emitter disposed within the treatment chamber defining therein a first chamber section and a second chamber section each having predetermined volumetric area suitable of providing ample space for complete and effective dissociation of gas vapor ions therein, and a plurality of gas vapor passages provided on said electronic emitter, said electronic emitter being capable of introducing electrons within the treatment chamber such that the gas vapor coming from the positive crankcase and fuel tank will be reformed within the treatment chamber, said electronic emitter further having a capacity of between approximately 5KV and approximately 7KV of electromotive force, and said voltage multiplier unit having a variable voltage capacity being capable of introducing said between approximately 5KV and approximately 7KV of electromotive force to the electronic emitter.